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CATALOGUE OF INVERTEBRATE TYPE SPECIMENS HELD IN THE COLLECTIONS OF THE WAITE AGRICULTURAL RESEARCH INSTITUTE AND THE SOUTH AUSTRALIAN DEPARTMENT OF AGRICULTURE

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Summary

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A catalogue of the type material of insects and other invertebrates held in the collections of the Waite Agricultural Research Institute (WARI) and the South Australian Department of Agriculture (SADA) is presented. Only paratypes are held in these collections; all primary types previously held have been transferred to the Australian National Insect Collection, Canberra. For each species the primary reference, location of the holotype, and the number of paratypes in WARI and SADA is provided. An account of the history, scope and importance of the collections is given.

Key Words: catalogue, type specimens, Insecta, Arachnida

Introduction

In South Australia identification of arthropods relevant to agriculture and forestry and related taxonomic research are serviced by specialized collections at the Waite Agricultural Research Institute, University of Adelaide, and the South Australian Department of Agriculture. These collections include over 250,000 specimens, many being authoritatively identified to species. Included are type specimens of more than 110 species in 25 families, a large proportion of which are of agricultural relevance. To date there has not been a catalogue published of the type holdings in these collections. As a result few systematists realise the scope and importance of these collections, whilst recent reorganisation and rationalisation of the Waite Institute's collection has involved the transfer of some type material to the Australian National Insect Collection, Canberra. Here we document the location, number and primary reference of the type material, and present a brief account of the history, scope and significance of the two collections.

History of the collections

The collection at the Waite Institute started soon after the appointment of the first entomologist, J. Davidson, in 1928. Under the terms of special State Government funding, Davidson was required to provide an advisory service in entomology to the Department of Agriculture and, later, to the Woods & Forest Service (Andrewartha 1945; Edgeloe 1984). Accordingly, Davidson requested that samples of agricultural pests be sent to him from South Australia and adjacent States for the purpose of making identifications; this material formed the basis of the present collection.

Up to 1945 research on locusts and insects associated with crops, pastures and orchards (chiefly by Davidson, D. S. Swan and H. G. Andrewartha) added significantly to the collection. In 1950 H. S. F. Lower was appointed as the first systematic entomologist and curator of the collection. Although his interest in acalyptrate Diptera and cicadellid bugs is not reflected in the collection's meagre holdings of these groups, his curatorship to the early 1960's saw further additions to the collection, mainly as a result of Swan's interest in Acarina and aculeate Hymenoptera, work on pest species of Lepidoptera by several workers and studies on the biology of pollination by K. M. Doull.

In 1959, P. R. Burks, appointed as the Department of Agriculture's first entomologist, started a separate collection, resulting in a decrease of reliance on the advisory service provided by the Waite Institute. Subsequently the two collections have developed in parallel: that at the Department of Agriculture primarily as a synoptic collection of invertebrates developed from material submitted for identification, and that at the Waite Institute from material originating from research work within the Department of Entomology.

From the early 1960's the Waite Institute collection developed significantly in two major areas: insects associated with native and planted forests because of the work of F. D. Morgan, and scale insects (Coccoidea) from taxonomic research by H. M. Brookes, who was curator from 1964 to 1982. In 1985 one of us (A.D.A.), with research interests in the systematics of hymenopteran parasitoids and biological control, was appointed lecturer in Systematic Entomology and became the

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third curator of the Waite Institute collection. In 1986, after the collection was transferred to a refurbished, air-conditioned room and was reorganized into new standard 10-drawer cabinets employing a unit-tray system, it was dedicated as the Duncan Swan Insect Collection, in honour of the contribution of Swan, who provided the major inspiration for expansion of the collection to its present size and importance.

In 1982 the Department of Agriculture using its Dec minicomputer, set up a data-base for storage and easy retrieval of taxonomic and biological information on arthropods relevant to agriculture and veterinary science (Caon *et al.* 1984). This system stores primary information from collections and/or card files at the Department of Agriculture, the Waite Institute, the Institute of Medical & Veterinary Science and the South Australian Museum. It enables rapid retrieval of information on taxonomic status, distribution, host association, abundance and damage assessment, and will undoubtedly be of great assistance in future extension work and entomological research in South Australia.

Notable holdings of importance to taxonomic research at the Department of Agriculture and Waite Institute include collections of acridid grasshoppers, scarabaeid beetles and larvae and other immature stages of groups injurious to plants. In addition the Waite Institute houses significant collections of Acarina, Araneae, Thysanoptera, Homoptera (chiefly Psylloidea and Coccoidea), Lepidoptera and parasitic Hymenoptera.

Catalogue of type material

The catalogue lists species published prior to 1989 for which type material is held in the two collections. For each species the primary reference, location of the holotype and number of paratypes is given. Holotypes reported in primary references to be located at the Waite Institute, have been transferred to the Australian National Insect Collection. Many paratypes have also been transferred, particularly for species of Coccoidea, as a large proportion of H. M. Brookes' collection was donated to ANIC in 1986 to aid with the centralization of coccoid research in Australia. Abbreviations of institutions are: AM, Australian Museum, Sydney; ANIC, Australian National Insect Collection, CSIRO, Canberra; BMNH, British Museum (Natural History), London; NZAC, New Zealand Arthropod Collection, DSIR, Auckland; QM, Queensland Museum, Brisbane; SADA, South Australian Department of Agriculture Collection, Adelaide; SAM, South Australian Museum, Adelaide; USNM, United States National Museum (Natural History), Washington; WARI, Waite Agricultural Research Institute Collection, Adelaide.

ACARINA

Ixodidae

Amblyomma triguttatum ornatissimum Roberts, 1962, Aust. J. Zool. 10: 376.
Holotype, ♀, QM; Paratypes, 2♀♀, WARI.

INSECTA

BLATTODEA

Blaberidae

Ataxigamia tatei Tepper, 1893, Trans. R. Soc. S. Aust. 18: 123.
Holotype, ♂, SAM; Paratype, 1♂, WARI.

ORTHOPTERA

Gryllidae

Gryllulus subniger Chopard, 1951, Rec. S. Aust. Mus. 9: 417.
Holotype, ♂, SAM; Paratypes, 3♂♂, 2♀♀, WARI.

HETEROPTERA

Lygaeidae

Zygocoris tindalei Gross, 1962, Rec. S. Aust. Mus. 14: 381.
Holotype, ♂, SAM; Paratype, 1♀, WARI.

Pentatomidae

Minchamia hubbardae Gross, 1976, *Plant Feeding and Other Bugs (Hemiptera) of South Australia, Heteroptera — Part II*, Govt Printer, S. Aust., p.415.
Holotype, ♂, SAM; Paratype, 1♀, WARI.

HOMOPTERA

Cicadellidae

Empoasca delta Wheeler, 1939, J. Wash. Acad. Sci. 29: 299.
Holotype, ♂, USNM; Paratypes, 2♂♂, 1♀, WARI.

Empoasca dolonis Oman, 1936, J. Wash. Acad. Sci. 26: 39.
Holotype, ♂, USNM; Paratypes, 1♂, 1♀, WARI.

Empoasca ensiformis Oman & Wheeler, 1938, Proc. ent. Soc. Wash. 40: 142.
Holotype, ♂, USNM; Paratypes, 2♂♂, 2♀♀, WARI.

Aphalaridae

Platyobria maddeni Taylor, 1987, J. Aust. ent. Soc. 26: 256.
Holotype, ♂, ANIC; Paratypes, 1♂, 1♀, WARI.

Platyobria minima Taylor, 1987, J. Aust. ent. Soc. 26: 261
Holotype, ♂, ANIC; Paratypes, 2♂♂, 2♀♀, WARI.

Spondyliaspididae

Anoeconeossa communis Taylor, 1987, J. Aust. ent. Soc. 26: 113.
Holotype, ♂, ANIC; Paratypes 1♂, 1♀, WARI.

Anoeconeossa copidiformis Taylor, 1987, J. Aust. ent. Soc. 26: 118.
Holotype: ♂, ANIC; Paratypes 5♂♂, 10♀♀, WARI.

Anoeconeossa vespertina Taylor, 1987, J. Aust. ent. Soc. 26: 118.
Holotype, ♂, ANIC; Paratypes, 2♂♂, 2♀♀, WARI.

Blastopsylla adnatariae Taylor, 1985, J. Aust. ent. Soc. 24:21
Holotype, ♂, ANIC; Paratypes, 2♂♂, 3♀♀, WARI.

Blastopsylla occidentalis Taylor, 1985, J. Aust. ent. Soc. 24: 22.
Holotype, ♂, ANIC; Paratypes, 3♂♂, 2♀♀, WARI.

Blastopsylla octosetulae Taylor, 1985, J. Aust. ent. Soc. 24: 24.
Holotype, ♂, ANIC; Paratypes, 2♂♂, 2♀♀, WARI.

Cardiaspina albitextura Taylor, 1962, Aust. J. Zool. 10: 332.
Holotype, ♀, ANIC; Paratypes, 1♂, 1♀, WARI.

Cardiaspina densitexta Taylor, 1962, Aust. J. Zool. 10: 334.
Holotype, ♀, ANIC; Paratypes, 30♀♀, WARI.

Cardiaspina retator Taylor, 1962, Aust. J. Zool. 10: 317.
Holotype, ♀, ANIC; Paratypes, 1♂, 1♀, WARI.

Glycaspis (Glycaspis) fuscovena Moore, 1970, Aust. Zool. 15: 288.
Holotype, ♂, ANIC; Paratypes, 6♂♂, WARI.

Glycaspis (Alloglycaspis) repentina Moore, 1964, Proc. Linn. Soc. N.S.W. 89: 148.
Holotype, ♂, AM; Paratypes, 7♂♂, 1♀, WARI.

Glycaspis (Alloglycaspis) wanhiensis Moore, 1964, Proc. Linn. Soc. N.S.W. 89: 148.
Holotype ♂, AM; Paratypes, 4♂♂, 3♀♀, WARI.

Triozidae

Schedotrioza marginata Taylor, 1987, J. Aust. ent. Soc. 26: 233.
Holotype, ♂, ANIC; Paratypes, 31♂♂, 18♀♀, WARI.

Asterolecaniidae

Frenchia bankstae Lambden & Kosztarab, 1981, Proc. ent. Soc. Wash. 83:109.
Holotype, ♀, ANIC; Paratypes, 8 Juv., WARI.

Coccidae

Symonicoccus aberrans Koteja & Brookes, 1981, Polskie Pismo ent. 51: 384.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Symonicoccus chorizandrae Koteja & Brookes, 1981, Polskie Pismo ent. 51: 387.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Symonicoccus stipae Koteja & Brookes, 1981, Polskie Pismo ent. 51: 383.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Diaspididae

Odonaspis australiensis Ben-Dov, 1988, U.S. Nat. Mus. Tech. Bull. 1723: 37.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Lecanodiaspididae

Brookesiella tuberans Lambden & Kosztarab, 1974, Ann ent. Soc. Am. 67: 409.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Lecanodiaspis eremocitri Howell & Kosztarab, 1974, Virg. Polytech. Inst. & State Univ. Div. Bull. 70: 41
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Pseudococcidae

Acinicoccus stipae Williams, 1985, Australian Mealybugs, BMNH, p.42.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Acinicoccus triodiae Williams, 1985, Australian Mealybugs, BMNH, p.42.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Apodastococcus onar Williams, 1985, Australian Mealybugs, BMNH, p.48.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Australiputo eucalypti Williams, 1985, Australian mealybugs, BMNH, p.63.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Chaetotrionymus murnpeowieńsis Williams, 1985, Australian Mealybugs, BMNH, p.72.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Chaetotrionymus pachylus Williams, 1985, Australian Mealybugs, BMNH, p.72.
Holotype, ♀, ANIC; Paratypes, 4♀♀, WARI.

Chorizococcus eriachnis Williams, 1985, Australian Mealybugs, BMNH, p.79.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Chorizococcus lii Brookes, 1977, J. Aust. ent. Soc. 15: 422.
= *Cryptoripersia lii* (Brookes) *vide* Williams, 1985, Australian Mealybugs, BMNH, p.102.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Chorizococcus petilus Brookes, 1977, J. Aust. ent. Soc. 15: 425.
= *Humococcus petilus* (Brookes) *vide* Williams, 1985, Australian Mealybugs, BMNH, p.178.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Chorizococcus radicalis Brookes, 1977, J. Aust. ent. Soc. 15: 427.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.
= *Vryburgia brevicruris* (McKenzie) *syn.* Williams, 1985, Australian mealybugs, BMNH, p.387.

Chorizococcus suhalpinus Brookes, 1976, J. Aust. ent. Soc. 15: 429.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Coorongia gahniae Williams, 1985, Australian Mealybugs, BMNH, p.92.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Crisicoccus acaciae Williams, 1985, Australian Mealybugs, BMNH, p.95.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Cypericoccus multipori Williams, 1985, Australian Mealybugs, BMNH, p.103.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Dysmicoccus aggeris Williams, 1985, Australian Mealybugs, BMNH, p.111.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Dysmicoccus anicus Williams, 1985, Australian Mealybugs, BMNH, p.111.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Dysmicoccus laporteae Williams, 1985, Australian Mealybugs, BMNH, p.133.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Dysmicoccus moundi Williams, 1985, Australian Mealybugs, BMNH, p.137.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Dysmicoccus victorianus Williams, 1985, Australian Mealybugs, BMNH, p.149.
Holotype, ♀, ANIC; Paratypes, 2 ♀ ♀, WARI.

Eucalyptococcus brookesae Williams, 1985, Australian Mealybugs, BMNH, p.155.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI

Eurycoccus antiscius Williams, 1985, Australian Mealybugs, BMNH, p.161.
Holotype, ♀, BMNH; Paratypes, 2 ♀ ♀, WARI.

Eurycoccus yanchepae Brookes, 1972, J. Aust. ent. Soc. 11: 132.
Holotype, ♀, ANIC; Paratypes, 2 ♀ ♀, WARI.
= *Maconellicoccus lanigerus* (Fuller) *syn.* Williams, 1985, Australian Mealybugs, BMNH, p.196.

Hadrococcus maireanae Williams, 1985, Australian Mealybugs, BMNH, p.169.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Hadrococcus pultenaeae Williams, 1985, Australian Mealybugs, BMNH, p.169.
Holotype, ♀, ANIC; Paratypes, 2 ♀ ♀, WARI

Heliococcus summervillei Brookes, 1978, J. Aust. ent. Soc. 17: 241.
Holotype, ♀, ANIC; Paratypes, 2 ♀ ♀, WARI.

Ityococcus beardsleyi Williams, 1985, Australian Mealybugs, BMNH, p.180.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Ityococcus eremocitri Williams, 1985, Australian Mealybugs, BMNH, p. 183.
Holotype, ♀, ANIC; Paratypes, 2 ♀ ♀, WARI.

Ityococcus milparinkae Williams, 1985, Australian Mealybugs, BMNH, p.185.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Luminicoccus flandersi Williams, 1985, Australian Mealybugs, BMNH, p.190.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Melanococcus cobaricus Williams, 1985, Australian Mealybugs, BMNH, p.209.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Melanococcus darwinensis Williams, 1985, Australian Mealybugs, BMNH, p.209.
Holotype, ♀, ANIC; Paratypes, 5 ♀ ♀, WARI.

Melanococcus morgani Williams, 1985, Australian Mealybugs, BMNH, p.217.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Melanococcus phyllodii Williams, 1985, Australian Mealybugs, BMNH, p.219.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Melanococcus senticosus Williams, 1985, Australian Mealybugs, BMNH, p.221.
Holotype, ♀, ANIC; Paratypes, 2 ♀ ♀, WARI.

Melanococcus tasmaniae Williams, 1985, Australian Mealybugs, BMNH, p.223.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Nipaecoccus exocarpi Williams, 1985, Australian Mealybugs, BMNH, p.237.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Nipaecoccus maireanae Williams, 1985, Australian Mealybugs, BMNH, p.240.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Peliococcus subcorticicola Williams, 1985, Australian Mealybugs, BMNH, p.257.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI

Phenacoccus hakeae Williams, 1985, Australian Mealybugs, BMNH, p.270.
Holotype, ♀, ANIC; Paratype, 1 ♀, WARI.

Poecilococcus longilobus Brookes, 1981, J. Aust. ent. Soc 20: 127.
Holotype, ♀, ANIC; Paratypes, 6 ♀ ♀, WARI.

Pseudococcus atalestus Williams, 1985, Australian Mealybugs, BMNH, p.287.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Pseudococcus chenopodii Williams, 1985, Australian Mealybugs, BMNH, p.294.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Pseudococcus eremophilae Williams, 1985, Australian Mealybugs, BMNH, p.306.
Holotype, ♀, ANIC; Paratype, 1♀ WARI.

Pseudococcus eucalypticus Williams, 1985, Australian Mealybugs, BMNH, p.310.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Pseudococcus goodeniae Williams, 1985, Australian Mealybugs, BMNH, p.313.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Pseudococcus hypergaeus Williams, 1985, Australian Mealybugs, BMNH, p.315.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Pseudococcus mintaroicus Williams, 1985, Australian Mealybugs, BMNH, p.320.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Pseudococcus onustus Williams, 1985, Australian Mealybugs, BMNH, p.320.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Pseudococcus symoni Williams, 1985, Australian Mealybugs, BMNH, p.333.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Rhastrococcus melaleucae Williams, 1985, Australian Mealybugs, BMNH, p.345.
Holotype, ♀, ANIC; Paratypes, 3♀♀, WARI.

Rhizoecus sphagni Williams, 1985, Australian Mealybugs, BMNH, p.357.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Trionymus ascripticius Williams, 1985, Australian Mealybugs, BMNH, p.368.
Holotype, ♀, ANIC; Paratypes, 4♀♀, WARI.

Trionymus gyrus Williams, 1985, Australian Mealybugs, BMNH, p.371.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Trionymus zoysiae Williams, 1985, Australian Mealybugs, BMNH, p.377.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Ventrispina epigaea Williams, 1985, Australian Mealybugs, BMNH, p.378.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Ventrispina lathetica Williams, 1985, Australian Mealybugs, BMNH, p.378.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Ventrispina woodi Williams, 1985, Australian Mealybugs, BMNH, p.381.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Vryburgia succulentarum Williams, 1985, Australian Mealybugs, BMNH, p.388.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Yudnapinna radicalis Williams, 1985, Australian Mealybugs, BMNH, p.390.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

THYSANOPTERA

Aeolothripidae

Cranothrips sititor Mound, 1972, J. Aust. ent. Soc. 11: 44.
Holotype, ♀, ANIC; Paratypes, 1♂, 2♀♀, WARI.

Cranothrips vesper Mound, 1972, J. Aust. ent. Soc. 11: 46. Holotype, ♀, ANIC; Paratypes, 6♂♂, 6♀♀, WARI.

Desmothrips davidsoni Morison, 1931, Bull. ent. Res. 21: 499.
Holotype, ♀, BMNH; Paratype, 1♀, WARI.
= *Desmothrips tenuicornis* (Bagnall) *Syn.* Mound, 1967, Bull. Br. Mus. nat. Hist. Ent. 20: 68.

Desmothrips elegans Morison, 1931, Bull. ent. Res. 21: 451. Holotype, ♀, BMNH; Paratypes, 2♀♀, WARI.
= *Desmothrips propinquus* (Bagnall) *syn.* Mound, 1967, Bull. Br. Mus. nat. Hist. Ent. 20: 65.

Phlaeothripidae

Csirothrips watsoni Mound, 1971, Bull. Br. Mus. nat. Hist. Ent. 25: 399.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Onchothrips arotrum Mound, 1971, Bull. Br. Mus. nat. Hist. Ent. 25: 447.
Holotype, ♀, ANIC; Paratypes, 2♀♀, WARI.

Warithrips maelzeri Mound, 1971, Bull. Br. Mus. nat. Hist. Ent. 25: 456.
Holotype, ♀, ANIC; Paratype, 1♀, WARI.

Thripidae

Odontothripiella andrewarthae Pitkin, 1972, J. Aust. ent. Soc. 11: 271
Holotype, ♂, ANIC; Paratype, 1♂, WARI.

Odontothripiella compta Pitkin, 1972, J. Aust. ent. Soc. 11: 275:
Holotype, ♂, ANIC; Paratypes, 1♂, 1♀, WARI.

Odontothripiella concolorata Pitkin, 1972, J. Aust. ent. Soc. 11: 278.
Holotype, ♀, ANIC; Paratypes, 4♀♀, WARI.

Odontothripiella hopei Pitkin, 1972, J. Aust. ent. Soc. 11: 281.
Holotype, ♂, ANIC; Paratypes, 1♂, 2♀♀, WARI.

Odontothripiella passalaina Pitkin, 1972, J. Aust. ent. Soc. 11: 28.
Holotype, ♂, ANIC; Paratypes, 1♂, 2♀♀, WARI.

Physothrips simplex Morison, 1930, Bull. ent. Res. 21: 12. = *Thrips simplex* (Morison) *vide* Bhati, 1969, Orient. Insects 3: 380.
Holotype ♀, BMNH; Paratype, 1♀, WARI

NEUROPTERA

Chrysopidae

Chrysopa australis New, 1980, Aust. J. Zool. Suppl. Ser. 77: 42.
Holotype, ♀, ANIC; Paratypes, 1♂, 2♀♀, WARI.

COLEOPTERA

Cerambycidae

Uracanthus cupressianus Rondonuwu & Austin, 1988, Trans. R. Soc. S. Aust. 112: 110.
Holotype, ♂, SAM; Paratypes, 21♂♂, 20♀♀, WARI.

Scarabaeidae

Colpochila kalambi Britton, 1986, Aust. J. Zool. Suppl. Ser. 118: 54.
Holotype, ♂; ANIC; Paratypes, 1♂, 1♀, SADA.

Telura petiolata Britton, 1987, Invertebr. Taxon. 1: 702.
Holotype, ♂; ANIC; Paratype, 1♂, SADA.

DIPTERA

Apioceridae

Apiocera helenae Paramonov, 1953, Aust. J. Zool. 1: 483.
Holotype, ♂, ANIC; Paratypes, 2♀♀, 3♂♂, WARI.

Stratiomyidae

Damaromyia interrupta James, 1950, Proc. ent. Soc. Wash. 52: 313.
Holotype, ♀, BMNH; Paratype, 1♂, WARI.

HYMENOPTERA

Braconidae

Apanteles alfalfae Nixon, 1960, Ann. Mag. nat. Hist. (13) 2: 303.
= *Iconella alfalfae* (Nixon) *vide* Mason, 1980. Mem. ent. Soc. Can. 115: 75.
Holotype, ♀, BMNH; Paratypes, 5♂♂, 2♀♀, WARI.

Apanteles penthocratus Austin, 1987, *In* M. J. W. Cock *et al.* (Eds) Slug and Nettle Caterpillars, CAB International, p.148.
Holotype, ♀, BMNH; Paratypes, 1♂, 2♀♀, WARI.

Fornicia maluensis Austin, 1987, *In* M. J. W. Cock *et al.* (Eds) Slug and Nettle Caterpillars, CAB International, p.157.
Holotype, ♀, BMNH; Paratypes, 4♂♂, 1♀, WARI.

Ichneumonidae

Temelucha cycnea Kerrich, 1959, Ann. Mag. nat. Hist (13) 2: 53.
Holotype, ♀, BMNH; Paratypes, 3♂♂, 2♀♀, WARI.

Scelionidae

Ceratobaeus clubionus Austin, 1983, Int. J. Insect Morph. Embryol. 12: 151; types designated Austin, 1984, Trans. R. Soc. S. Aust. 108: 23.
Holotype, ♀, ANIC; Paratypes, 1♂, 4♀♀, WARI.

Ceratobaeus cuspicornutus Austin, 1983, Int. J. Insect Morph. Embryol. 12: 151; types designated Austin, 1984, Trans. R. Soc. S. Aust. 108: 25.
Holotype, ♀, ANIC; Paratypes, 1♂, 2♀♀, WARI.

Ceratobaeus masneri Austin, 1983, Int. J. Insect Morph. Embryol. 12: 143; types designated Austin, 1984, Trans. R. Soc. S. Aust. 108: 29.
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